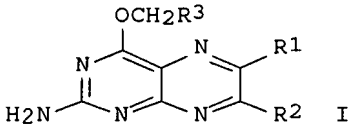
INVENTOR SEARCH

=> d ibib abs hitstr l7 1-2

L7 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:673295 HCAPLUS Full-text
DOCUMENT NUMBER: 143:173137
TITLE: 2-Amino-O4-substituted pteridines and their use as inhibitors of O6-alkylguanine-DNA alkyltransferase
INVENTOR(S): **Moschel, Robert C.; Nelson, Michael E.; Pegg, Anthony E.; Loktionova, Natalia A.**
PATENT ASSIGNEE(S): Government of the United States of America, Represented by the Secretary Department of Health and Human Services, USA; The Penn State Research Foundation
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2005068465	A1	20050728	WO 2004-US41577		20041210
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2004313931	A1	20050728	AU 2004-313931		20041210
CA 2552826	A1	20050728	CA 2004-2552826		20041210
EP 1701957	A1	20060920	EP 2004-813836		20041210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU					
US 2007155752	A1	20070705	US 2006-585566		20060829
PRIORITY APPLN. INFO.:			US 2004-534519P	P	20040106
			WO 2004-US41577	W	20041210

OTHER SOURCE(S): CASREACT 143:173137; MARPAT 143:173137
GI



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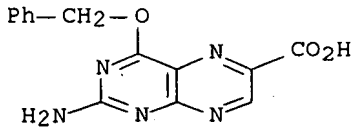
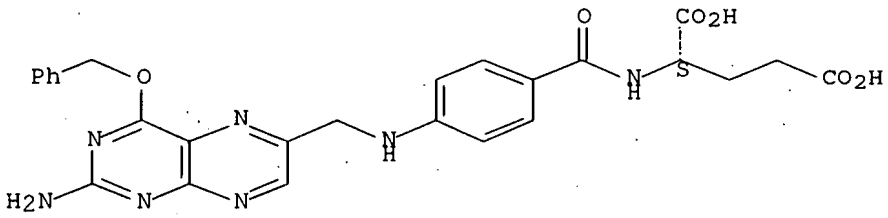
RN 737817-21-9 HCAPLUS
CN 6-Pteridinecarboxylic acid, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

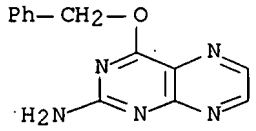


RN 737817-23-1 HCAPLUS
CN L-Glutamic acid, N-[4-[[[2-amino-4-(phenylmethoxy)-6-pteridinyl]methyl]amino]benzoyl]- (CA INDEX NAME)

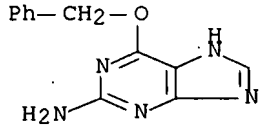
Absolute stereochemistry.



IT **13005-91-9 19916-73-5**, O6-Benzylguanine
101092-03-9, 2-Amino-4-(benzyloxy)-6,7-dimethylpteridine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-alkylguanine-DNA alkyltransferase)
RN 13005-91-9 HCAPLUS
CN 2-Pteridinamine, 4-(phenylmethoxy)- (CA INDEX NAME)



RN 19916-73-5 HCAPLUS
CN 9H-Purin-2-amine, 6-(phenylmethoxy)- (CA INDEX NAME)



RN 101092-03-9 HCAPLUS
CN 2-Pteridinamine, 6,7-dimethyl-4-(phenylmethoxy)- (9CI) (CA INDEX NAME)

AB Pteridine derivs., such as I [R1, R2 = H, CHO, alkyl, carboxyl, hydroxyalkyl, formylalkyl, carboxyalkyl, etc.; R3 = Ph, heterocyclyl, etc.], were prepared for use in pharmaceutical compns. which enhance the chemotherapeutic effectiveness of cancer treatment agents, such as lomustine, carmustine, semustine, nimustine, fotomustine, mitozolomide, clomesone, temozolomide, dacarbazine, procarbazine and streptozocin, by deactivating the O6-alkylguanine-DNA alkyltransferase (AGT) enzyme inhibit the reaction of the AGT enzyme with an alkylated DNA. Thus, 2-amino-4-(benzyloxy)-6-hydroxymethylpteridine I (R1 = CH2OH, R2 = H, R3 = Ph) was prepared in 28.1% yield via a cyclocondensation reaction of 2,4,5-triamino-6-(benzyloxy)pyrimidine with dihydroxyacetone dimer using sodium ascorbate in DMA/H2O. The prepared pteridines were assayed for AGT inhibitory activity and for cytotoxicity against HT29 and A549 human cancer cell lines.

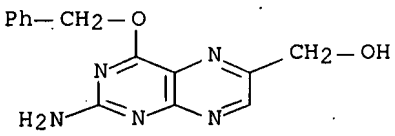
IT **77271-19-3**, O6-Alkylguanine-DNA alkyltransferase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-alkylguanine-DNA alkyltransferase)

RN 77271-19-3 HCAPLUS
CN Methyltransferase, deoxyribonucleate (O-methylguanine)-protein (cysteine) (CA INDEX NAME)

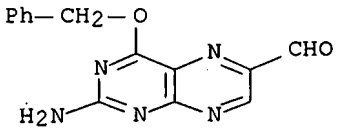
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **737817-20-8P**, 2-Amino-4-(benzyloxy)-6-hydroxymethylpteridine
737817-22-0P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-alkylguanine-DNA alkyltransferase)

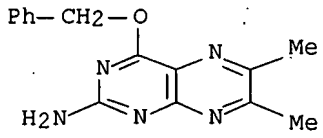
RN 737817-20-8 HCAPLUS
CN 6-Pteridinemethanol, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)



RN 737817-22-0 HCAPLUS
CN 6-Pteridinecarboxaldehyde, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

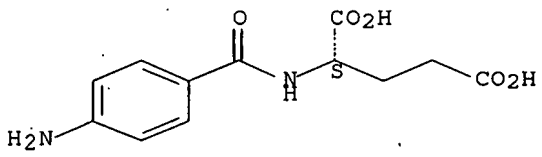


IT **737817-21-9P 737817-23-1P**, O4-Benzylfolic acid
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-alkylguanine-DNA alkyltransferase)

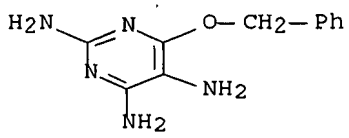


IT **4271-30-1 19916-72-4**, 2,4,5-Triamino-6-(benzyloxy)pyrimidine **26776-70-5**, Dihydroxyacetone dimer
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-alkylguanine-DNA alkyltransferase)
RN 4271-30-1 HCAPLUS
CN L-Glutamic acid, N-(4-aminobenzoyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



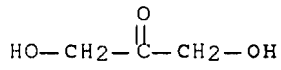
RN 19916-72-4 HCAPLUS
CN 2,4,5-Pyrimidinetriamine, 6-(phenylmethoxy)- (CA INDEX NAME)



RN 26776-70-5 HCAPLUS
CN 2-Propanone, 1,3-dihydroxy-, dimer (CA INDEX NAME)

CM 1

CRN 96-26-4
CMF C3 H6 O3

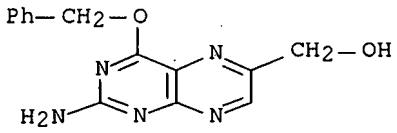


REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

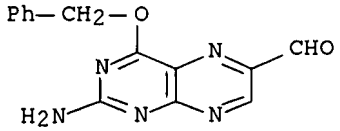
L7 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:498199 HCAPLUS Full-text
DOCUMENT NUMBER: 141:184590
TITLE: 2-Amino-O4-benzylpteridine Derivatives: Potent Inactivators of O6-Alkylguanine-DNA Alkyltransferase
AUTHOR(S): **Nelson, Michael E.; Loktionova, Natalia**

A.; Pegg, Anthony E.; Moschel, Robert C.
CORPORATE SOURCE: Laboratory of Comparative Carcinogenesis, National Cancer Institute at Frederick, Frederick, MD, 21702, USA
SOURCE: Journal of Medicinal Chemistry (2004), 47(15), 3887-3891
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:184590
AB 2-Amino-O4-benzylpteridine (1), 2-amino-O4-benzyl-6,7-dimethylpteridine (2), 2-amino-O4-benzyl-6-hydroxymethylpteridine (4), 2-amino-O4- benzylpteridine-6-carboxylic acid (5), 2-amino-O4-benzyl-6-formylpteridine (6), and O4-benzylfolic acid (7) are shown to be as potent or more potent inactivators of the human DNA repair protein O6-alkylguanine-DNA alkyltransferase (alkyltransferase) in vitro than O6-benzylguanine, the prototype alkyltransferase inactivator currently in clin. trials. Addnl., the neg. charged (at physiol. pH) inactivators 2-amino-O4-benzylpteridine- 6-carboxylic acid (5) and O4-benzylfolate (7) are far more water soluble than O6-benzylguanine. The activity of O4-benzylfolic acid (7) is particularly noteworthy because it is roughly 30 times more active than O6-benzylguanine against the wild-type alkyltransferase and is even capable of inactivating the P140K mutant alkyltransferase that is resistant to inactivation by O6-benzylguanine. All the pteridine derivs. except 2-amino-O4-benzylpteridine-6-carboxylic acid are effective in enhancing cell killing by 1,3-bis(2-chloroethyl)-1-nitrosourea (BCNU). However, the effectiveness of O4-benzylfolate as an adjuvant for cell killing by BCNU appears to be a function of a cell's α-folate receptor expression. Thus, O4-benzylfolate is least effective as an adjuvant in A549 cells (which express little if any receptor), is moderately effective in HT29 cells (which express low levels of the receptor), but is very effective in KB cells (which are known to express high levels of the α-folate receptor). Therefore, O4-benzylfolic acid shows promise as an agent for possible tumor-selective alkyltransferase inactivation, which suggests it may prove to be superior to O6-benzylguanine as a chemotherapy adjuvant.
IT **77271-19-3**, O6-Alkylguanine-DNA alkyltransferase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation and structure-activity relationship of 2-amino-O4-benzylpteridine derivs. as potent inactivators of O6-alkylguanine-DNA alkyltransferase)
RN 77271-19-3 HCAPLUS
CN Methyltransferase, deoxyribonucleate (O-methylguanine)-protein (cysteine) (CA INDEX NAME)

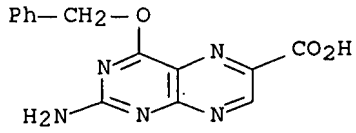
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **737817-20-8P 737817-22-0P**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and structure-activity relationship of 2-amino-O4-benzylpteridine derivs. as potent inactivators of O6-alkylguanine-DNA alkyltransferase)
RN 737817-20-8 HCAPLUS
CN 6-Pteridinemethanol, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)



RN 737817-22-0 HCAPLUS
CN 6-Pteridinecarboxaldehyde, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

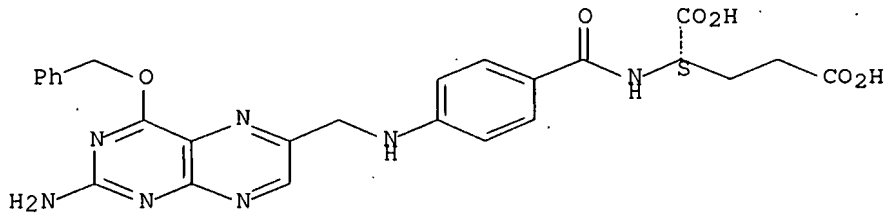


IT **737817-21-9P 737817-23-1P**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and structure-activity relationship of 2-amino-O4-benzylpteridine derivs. as potent inactivators of O6-alkylguanine-DNA alkyltransferase)
RN 737817-21-9 HCAPLUS
CN 6-Pteridinecarboxylic acid, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)



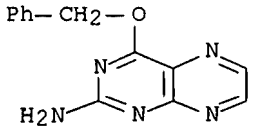
RN 737817-23-1 HCAPLUS
CN L-Glutamic acid, N-[4-[[[2-amino-4-(phenylmethoxy)-6-pteridinyl]methyl]amino]benzoyl]- (CA INDEX NAME)

Absolute stereochemistry.

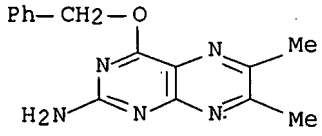


IT **13005-91-9 101092-03-9**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation and structure-activity relationship of 2-amino-O4-benzylpteridine derivs. as potent inactivators of O6-alkylguanine-DNA alkyltransferase)
RN 13005-91-9 HCAPLUS

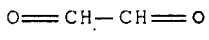
CN 2-Pteridinamine, 4-(phenylmethoxy)- (CA INDEX NAME)



RN 101092-03-9 HCAPLUS
CN 2-Pteridinamine, 6,7-dimethyl-4-(phenylmethoxy)- (9CI) (CA INDEX NAME)



IT **107-22-2**, Glyoxal **431-03-8**, Diacetyl **4271-30-1**
, L-Glutamic acid, n-(4-aminobenzoyl)- **19916-72-4**
26776-70-5, Dihydroxyacetone dimer
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and structure-activity relationship of 2-amino-O4-benzylpteridine derivs. as potent inactivators of O6-alkylguanine-DNA alkyltransferase)
RN 107-22-2 HCAPLUS
CN Ethanedial (CA INDEX NAME)



RN 431-03-8 HCAPLUS
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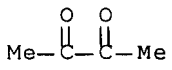
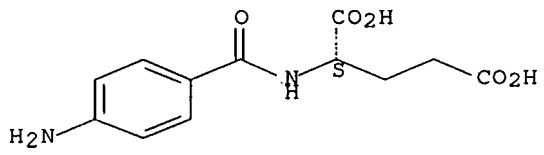


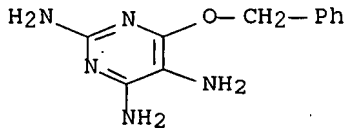
RN 4271-30-1 HCAPLUS
CN L-Glutamic acid, N-(4-aminobenzoyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 19916-72-4 HCAPLUS

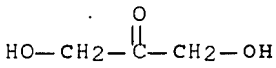
CN 2,4,5-Pyrimidinetriamine, 6-(phenylmethoxy)- (CA INDEX NAME)



RN 26776-70-5 HCAPLUS
CN 2-Propanone, 1,3-dihydroxy-, dimer (CA INDEX NAME)

CM 1

CRN 96-26-4
CMF C3 H6 O3



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RESULTS FROM REGISTRY, CAPLUS, AND USPATFULL

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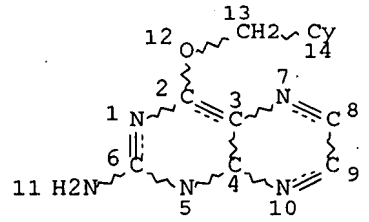
L8 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
L10 30 SEA FILE=REGISTRY SSS FUL L8
L11 49 SEA FILE=HCAPLUS ABB=ON L10
L12 41 SEA FILE=HCAPLUS ABB=ON L11 AND (PRD<20060829 OR PD<20060829)

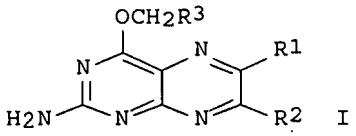
L13 5 SEA FILE=HCAPLUS ABB=ON L12 AND ?ALKYLTRANSFERASE?
L14 3 SEA FILE=USPATFULL ABB=ON L12 AND ?ALKYLTRANSFERASE?
L15 6 DUP REMOV L13 L14 (2 DUPLICATES REMOVED)
L16 8 SEA L12 AND ?ALKYLGUANINE?
L17 8 SEA L13 OR L16
L18 8 SEA L15 OR L17

=> d ibib abs hitstr l18 1-8

L18 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:673295 HCAPLUS Full-text
DOCUMENT NUMBER: 143:173137
TITLE: 2-Amino-O4-substituted pteridines and their use as inhibitors of O6-**alkylguanine**-DNA **alkyltransferase**
INVENTOR(S): Moschel, Robert C.; Nelson, Michael E.; Pegg, Anthony E.; Loktionova, Natalia A.
PATENT ASSIGNEE(S): Government of the United States of America, Represented by the Secretary Department of Health and Human Services, USA; The Penn State Research Foundation
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2005068465 A1 20050728 WO 2004-US41577 20041210 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2004313931 A1 20050728 AU 2004-313931 20041210 <--
CA 2552826 A1 20050728 CA 2004-2552826 20041210 <--
EP 1701957 A1 20060920 EP 2004-813836 20041210 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU
US 2007155752 A1 20070705 US 2006-585566 20060829 <--
PRIORITY APPLN. INFO.: US 2004-534519P P 20040106 <--
WO 2004-US41577 W 20041210 <--
OTHER SOURCE(S): CASREACT 143:173137; MARPAT 143:173137
GI



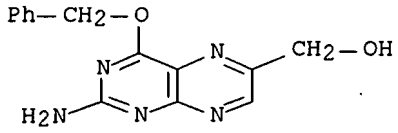
I

AB Pteridine derivs., such as I [R1, R2 = H, CHO, alkyl, carboxyl, hydroxyalkyl, formylalkyl, carboxyalkyl, etc.; R3 = Ph, heterocyclyl, etc.], were prepared for use in pharmaceutical compns. which enhance the chemotherapeutic effectiveness of cancer treatment agents, such as lomustine, carmustine, semustine, nimustine, fotomustine, mitozolomide, clomesone, temozolomide, dacarbazine, procarbazine and streptozocin, by deactivating the O6-**alkylguanine**-DNA **alkyltransferase** (AGT) enzyme inhibit the reaction of the AGT enzyme with an alkylated DNA. Thus, 2-amino-4-(benzyloxy)-6-hydroxymethylpteridine I (R1 = CH2OH, R2 = H, R3 = Ph) was prepared in 28.1% yield via a cyclocondensation reaction of 2,4,5-triamino-6-(benzyloxy)pyrimidine with dihydroxyacetone dimer using sodium ascorbate in DMA/H2O. The prepared pteridines were assayed for AGT inhibitory activity and for cytotoxicity against HT29 and A549 human cancer cell lines.

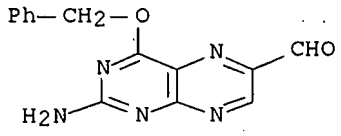
IT **737817-20-8P**, 2-Amino-4-(benzyloxy)-6-hydroxymethylpteridine
737817-22-0P.
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-**alkylguanine**-DNA **alkyltransferase**)

RN 737817-20-8 HCAPLUS

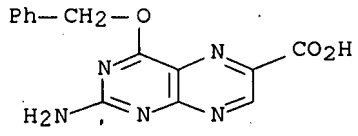
CN 6-Pteridinemethanol, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)



RN 737817-22-0 HCAPLUS
CN 6-Pteridinecarboxaldehyde, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

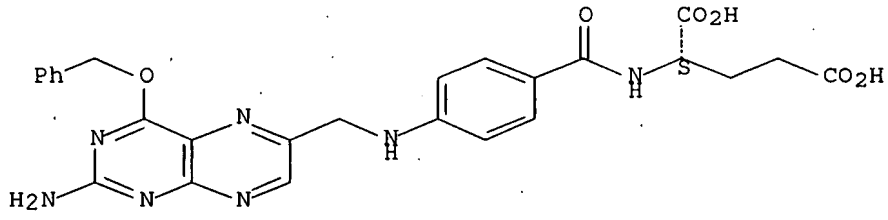


IT **737817-21-9P 737817-23-1P**, O4-Benzylfolic acid
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-**alkylguanine**-DNA **alkyltransferase**)
RN 737817-21-9 HCAPLUS
CN 6-Pteridinecarboxylic acid, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

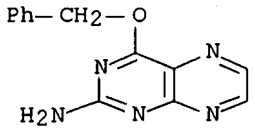


RN 737817-23-1 HCAPLUS
CN L-Glutamic acid, N-[4-[[[2-amino-4-(phenylmethoxy)-6-pteridinyl]methyl]amino]benzoyl]- (CA INDEX NAME)

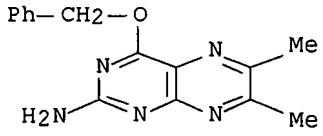
Absolute stereochemistry.



IT **13005-91-9 101092-03-9**, 2-Amino-4-(benzyloxy)-6,7-dimethylpteridine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-**alkylguanine**-DNA **alkyltransferase**)
RN 13005-91-9 HCAPLUS
CN 2-Pteridinamine, 4-(phenylmethoxy)- (CA INDEX NAME)



RN 101092-03-9 HCAPLUS
CN 2-Pteridinamine, 6,7-dimethyl-4-(phenylmethoxy)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

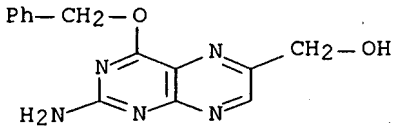
L18 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:498199 HCAPLUS Full-text
DOCUMENT NUMBER: 141:184590
TITLE: 2-Amino-O4-benzylpteridine Derivatives: Potent Inactivators of O6-**Alkylguanine**-DNA **Alkyltransferase**
AUTHOR(S): Nelson, Michael E.; Loktionova, Natalia A.; Pegg, Anthony E.; Moschel, Robert C.
CORPORATE SOURCE: Laboratory of Comparative Carcinogenesis, National Cancer Institute at Frederick, Frederick, MD, 21702, USA
SOURCE: Journal of Medicinal Chemistry (**2004**), 47(15), 3887-3891
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:184590

AB 2-Amino-O4-benzylpteridine (1), 2-amino-O4-benzyl-6,7-dimethylpteridine (2), 2-amino-O4-benzyl-6-hydroxymethylpteridine (4), 2-amino-O4- benzylpteridine-6-carboxylic acid (5), 2-amino-O4-benzyl-6-formylpteridine (6), and O4-benzylfolic acid (7) are shown to be as potent or more potent inactivators of the human DNA repair protein O6-**alkylguanine**-DNA **alkyltransferase** (**alkyltransferase**) in vitro than O6-benzylguanine, the prototype **alkyltransferase** inactivator currently in clin. trials. Addnl., the neg. charged (at physiol. pH) inactivators 2-amino-O4-benzylpteridine-6-carboxylic acid (5) and O4-benzylfolate (7) are far more water soluble than O6-benzylguanine. The activity of O4-benzylfolic acid (7) is particularly noteworthy because it is roughly 30 times more active than O6-benzylguanine against the wild-type **alkyltransferase** and is even capable of inactivating the P140K mutant **alkyltransferase** that is resistant to inactivation by O6-benzylguanine. All the pteridine derivs. except 2-amino-O4-benzylpteridine-6-carboxylic acid are effective in enhancing cell killing by 1,3-bis(2-chloroethyl)-1-nitrosourea (BCNU). However, the effectiveness of O4-benzylfolate as an adjuvant for cell killing by BCNU appears to be a function of a cell's α-folate receptor expression. Thus, O4-benzylfolate is least

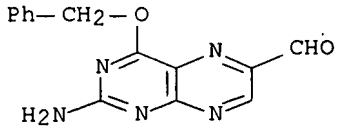
effective as an adjuvant in A549 cells (which express little if any receptor), is moderately effective in HT29 cells (which express low levels of the receptor), but is very effective in KB cells (which are known to express high levels of the α-folate receptor). Therefore, O4-benzylfolic acid shows promise as an agent for possible tumor-selective **alkyltransferase** inactivation, which suggests it may prove to be superior to O6-benzylguanine as a chemotherapy adjuvant.

IT **737817-20-8P 737817-22-0P**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and structure-activity relationship of 2-amino-O4-benzylpteridine derivs. as potent inactivators of O6-**alkylguanine**-DNA **alkyltransferase**)

RN 737817-20-8 HCAPLUS
CN 6-Pteridinemethanol, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

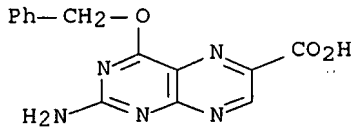


RN 737817-22-0 HCAPLUS
CN 6-Pteridinecarboxaldehyde, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)



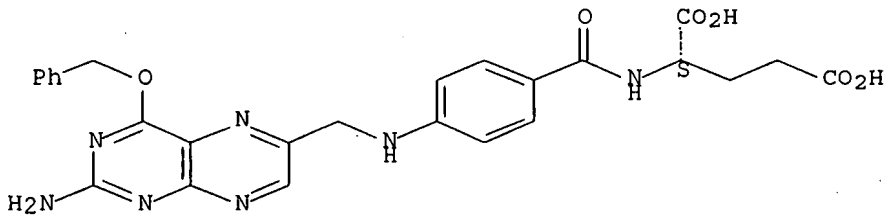
IT **737817-21-9P 737817-23-1P**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and structure-activity relationship of 2-amino-O4-benzylpteridine derivs. as potent inactivators of O6-**alkylguanine**-DNA **alkyltransferase**)

RN 737817-21-9 HCAPLUS
CN 6-Pteridinecarboxylic acid, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

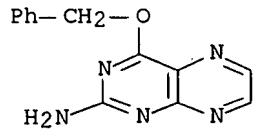


RN 737817-23-1 HCAPLUS
CN L-Glutamic acid, N-[4-[[[2-amino-4-(phenylmethoxy)-6-pteridinyl]methyl]amino]benzoyl]- (CA INDEX NAME)

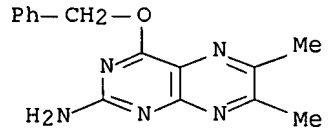
Absolute stereochemistry.



IT **13005-91-9 101092-03-9**
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation and structure-activity relationship of 2-amino-O4-benzylpteridine derivs. as potent inactivators of O6-**alkylguanine**-DNA **alkyltransferase**)
RN 13005-91-9 HCAPLUS
CN 2-Pteridinamine, 4-(phenylmethoxy)- (CA INDEX NAME)



RN 101092-03-9 HCAPLUS
CN 2-Pteridinamine, 6,7-dimethyl-4-(phenylmethoxy)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:531657 HCAPLUS Full-text
DOCUMENT NUMBER: 133:135165
TITLE: Preparation of pyrimidine derivatives and guanine derivatives, and their use in treating tumor cells
INVENTOR(S): McMurry, Thomas Brian Hamilton; McElhinney, Robert Stanley; McCormick, Joan Elizabeth; Donnelly, Dorothy Josephine; Murray, Paul; Carola, Christophe; Elder, Rhoderick Hugh; Kelly, Jane; Margison, Geoffrey Paul; Watson, Amanda Jean; Rafferty, Joseph Anthony; Willington, Mark Andrew; Middleton, Mark Ross
PATENT ASSIGNEE(S): Cancer Research Campaign Technology Limited, UK
SOURCE: U.S., 63 pp., Cont.-in-part of U.S. Ser. No. 568,576.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

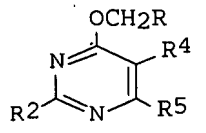
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6096724	A	20000801	US 1998-88740	19980602 <--
US 6043228	A	20000328	US 1995-568576	19951207 <--
US 5929046	A	19990727	US 1995-572966	19951215 <--
WO 9720843	A1	19970612	WO 1996-IE84	19961209 <--

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN

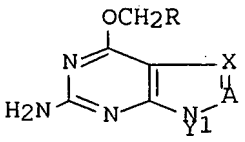
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:		
US 1995-568576	A2	19951207 <--
US 1995-572966	A2	19951215 <--
WO 1996-IE84	A2	19961209 <--
IE 1993-432	A	19930608 <--
GB 1994-10421	A	19940523 <--
WO 1994-IE31	A2	19940608 <--

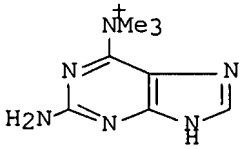
OTHER SOURCE(S): MARPAT 133:135165
GI



I



II



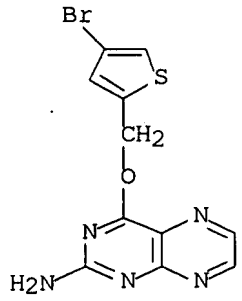
III

AB The present invention provides certain 6-hetarylalkyloxy pyrimidine derivs. I [R is a cyclic group having at least one 5- or 6-membered heterocyclic ring, optionally with a carbocyclic or heterocyclic ring fused thereto, the or each heterocyclic ring having at least one hetero atom chosen from O, N, or S, or a substituted derivative thereof, or an (un)substituted Ph; R2 = H, C1-5-alkyl, halogen or NHY1; R4, R5 = H, NH2 or NOn; n = 1, 2; or R4 and R5 together with the pyrimidine ring form a 5- or 6-membered ring structure containing one or more heterocyclic atoms; Y1 = H, ribosyl, deoxyribosyl, arabinosyl, CH(XR'')R'''; X = O, S; R'', R''' = (un)sunstituted alkyl] and guanine analogs II [X = CH, N; A = CH, N, provided that if X = N and A = CH, Y1 is not H or ribosyl, deoxyribosyl, CH(XR'')R'''] and pharmaceutically acceptable salts thereof, which exhibit the ability to deplete O6-**alkylguanine**-DNA **alkyltransferase** (ATase) activity. Thus, O6-(4- bromothenyl)guanine (II; R = 4-bromo-2-thienyl, A = CH, X = N, Y1 = H) was prepared via reaction of 4-

bromothenyl alc. with guanine ammonium salt III·Cl. II (R = 4-bromo-2-thienyl, A = CH, X = N, Y1 = H) was active against ATase from various tissues of NU/NU mice [36 fm/mg (tumor); 89.7 fm/mg (liver); 24.3 fm/mg (kidney); 42 fm/mg (bone marrow)] and showed 93% survival rate in mice after 14 days vs. 20 mg/kg BCNU in DBA.

IT **192441-15-9P 192441-17-1P 286941-18-2P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of pyrimidine derivs. and guanine analogs for treating tumor cells and as inhibitors of DNA **alkyltransferase**)

RN 192441-15-9 HCAPLUS
CN 2-Pteridinamine, 4-[(4-bromo-2-thienyl)methoxy]- (9CI) (CA INDEX NAME)



RN 192441-17-1 HCAPLUS
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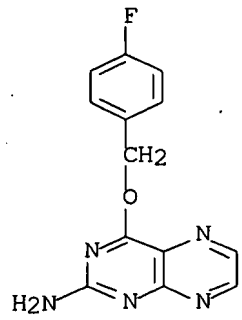
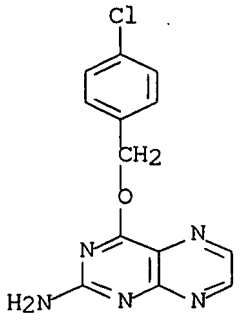


RN 286941-18-2 HCAPLUS
CN 2-Pteridinamine, 4-[(4-chlorophenyl)methoxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:468047 HCAPLUS Full-text
DOCUMENT NUMBER: 131:116252
TITLE: Preparation of 6-heteroarylalkoxypyrimidines and -purines having O6-**alkylguanine**-DNA **alkyltransferase** depleting activity.
INVENTOR(S): McMurray, Thomas Brian Hamilton; McElhinney, Robert Stanley; Donnelly, Dorothy Josephine; Murray, Paul; Carola, Christophe; Elder, Rhoderick Hugh; Kelly, Jane; Margison, Geoffrey Paul; Rafferty, Joseph Anthony; Watson, Amanda Jean; Willington, Mark Andrew
PATENT ASSIGNEE(S): Cancer Research Campaign Technology Ltd., UK
SOURCE: U.S., 15 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English.
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5929046	A	19990727	US 1995-572966	19951215 <--
WO 9429312	A1	19941222	WO 1994-IE31	19940608 <--
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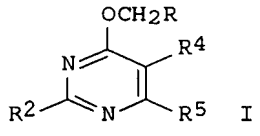
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6043228	A	20000328	US 1995-568576	19951207 <--
CA 2239968	A1	19970612	CA 1996-2239968	19961209 <--
CA 2239968	C	20070123		
WO 9720843	A1	19970612	WO 1996-IE84	19961209 <--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9720142	A	19970627	AU 1997-20142	19961209 <--
AU 715016	B2	20000113		
EP 874848	A1	19981104	EP 1996-943278	19961209 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO					
JP 2000501415	T	20000208	JP 1997-521129		19961209 <--
US 6096724	A	20000801	US 1998-88740		19980602 <--
PRIORITY APPLN. INFO.:			WO 1994-IE31	A2	19940608 <--
			US 1995-568576	A2	19951207 <--
			IE 1993-432	A	19930608 <--
			GB 1994-10421	A	19940523 <--
			US 1995-572966	A	19951215 <--
			WO 1996-IE84	W	19961209 <--

OTHER SOURCE(S): MARPAT 131:116252
GI

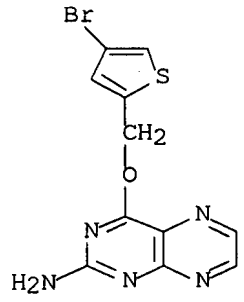


I

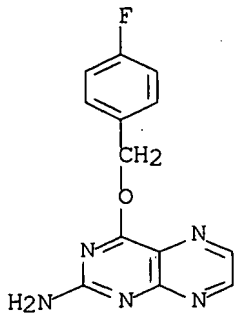
AB Title compds. [I; R = (substituted) cyclic group having ≥1 5-6 membered heterocyclic ring, optionally with a carbocyclic or heterocyclic ring fused thereto, Ph; R2 = H, alkyl, halo, NH2; R4, R5 = H, NH2, NO, NO2; R4R5 = atoms to form a 5-6 membered ring structure containing ≥1 heteroatoms], were prepared Thus, O6-(piperonyl)-8-aza-7-deazaguanine inactivated ATase with IC50 = 0.0065 μM.

IT **192441-15-9P 192441-17-1P 192441-43-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 6-heteroarylalkoxypyrimidines and -purines having O6-**alkylguanine**-DNA **alkyltransferase** depleting activity)

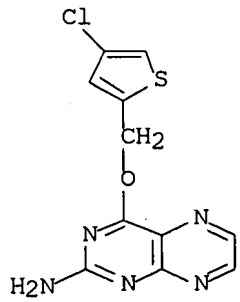
RN 192441-15-9 HCAPLUS
CN 2-Pteridinamine, 4-[(4-bromo-2-thienyl)methoxy]- (9CI) (CA INDEX NAME)



RN 192441-17-1 HCAPLUS
CN 2-Pteridinamine, 4-[(4-fluorophenyl)methoxy]- (9CI) (CA INDEX NAME)



RN 192441-43-3 HCAPLUS
CN 2-Pteridinamine, 4-[(4-chloro-2-thienyl)methoxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:496835 HCAPLUS Full-text
DOCUMENT NUMBER: 127:108802
TITLE: Preparation of pyrimidine and guanine derivatives, and their use in treating tumor cells
INVENTOR(S): McMurry, Thomas Brian Hamilton; McElhinney, Robert Stanley; McCormick, Joan Elizabeth; Donnelly, Dorothy Josephine; Murray, Paul; Carola, Christophe; Elder, Rhoderick Hugh; Kelly, Jane; et al.
PATENT ASSIGNEE(S): UK
SOURCE: PCT Int. Appl., 129 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

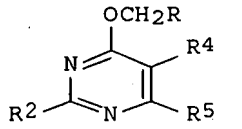
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9720843	A1	19970612	WO 1996-IE84	19961209 <--

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,

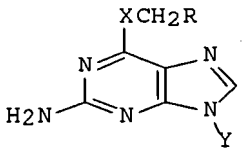
MR, NE, SN, TD, TG					
US 6043228	A	20000328	US 1995-568576	19951207	<--
US 5929046	A	19990727	US 1995-572966	19951215	<--
CA 2239968	A1	19970612	CA 1996-2239968	19961209	<--
CA 2239968	C	20070123			
AU 9720142	A	19970627	AU 1997-20142	19961209	<--
AU 715016	B2	20000113			
EP 874848	A1	19981104	EP 1996-943278	19961209	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 2000501415	T	20000208	JP 1997-521129	19961209	<--
US 6096724	A	20000801	US 1998-88740	19980602	<--
PRIORITY APPLN. INFO.:			US 1995-568576	A 19951207	<--
			US 1995-572966	A 19951215	<--
			IE 1993-432	A 19930608	<--
			GB 1994-10421	A 19940523	<--
			WO 1994-IE31	A2 19940608	<--
			WO 1996-IE84	W 19961209	<--

OTHER SOURCE(S): MARPAT 127:108802

GI



I



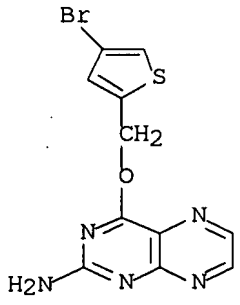
II

AB Pyrimidines I (R = heterocyclic ring, Ph, substituted Ph; R2 = H, alkyl, halogen, NH2; R4, R5 = H, NH-Y' or NOn; Y = H, ribosyl, deoxyribosyl, arabinosyl; n = 1 or 2; R4R5 = 5- or 6-membered heterocyclic ring) and guanines II (X = O, S; R = heterocyclic ring, Ph, substituted Ph; Y = H, ribosyl, deoxyribosyl, arabinosyl) were prepared and exhibited the ability to deplete O6-**alkylguanine**-DNA **alkyltransferase** (ATase) activity in tumor cells. Thus, guanine II (X = O, Y = H, R = 4-bromothenyl) was prepared and showed ATase mean activity of ~36 fm/mg, compared to 125 fm/mg in the control, when tested in tumor tissue of NU/NU mice.

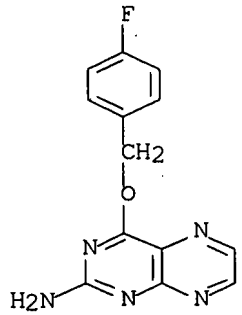
IT **192441-15-9P 192441-17-1P 192441-43-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of pyrimidine and guanine derivs. for use in treating tumor cells)

RN 192441-15-9 HCAPLUS

CN 2-Pteridinamine, 4-[(4-bromo-2-thienyl)methoxy]- (9CI) (CA INDEX NAME)



RN 192441-17-1 HCAPLUS
CN 2-Pteridinamine, 4-[(4-fluorophenyl)methoxy]- (9CI) (CA INDEX NAME)



RN 192441-43-3 HCAPLUS
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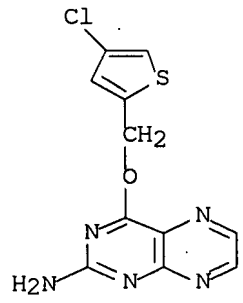


L18 ANSWER 6 OF 8 USPATFULL on STN
ACCESSION NUMBER: 2007:177931 USPATFULL Full-text
TITLE: 2-Amino-o4-substituted pteridines and their use as inactivators of o6-**alkylguanine**-dna **alkyltransferase**
INVENTOR(S): Moschel, Rorbert C., Frederick, MD, UNITED STATES
Nelson, Michael E., Derwood, MD, UNITED STATES
Pegg, Anthony E., Hershey, PA, UNITED STATES
Loktionova, Natalia A., Elizabeth Town, PA, UNITED STATES

PATENT ASSIGNEE(S): Government of the United States of America, (U.S. corporation)
Dept of Health and Human Services, Rockville, MD, UNITED STATES (U.S. corporation)
THe Penn State Research Foundation, University Park, PA, UNITED STATES (U.S. corporation)

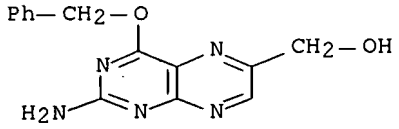
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2007155752	A1	20070705	
APPLICATION INFO.:	US 2004-585566	A1	20041210	(10)
	WO 2004-US41577		20041210	
			20060829	PCT 371 date

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2004-534519P	20040106	(60) <--

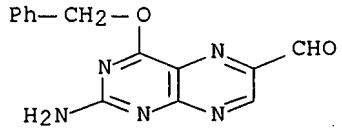
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: LEYDIG, VOIT & MAYER, LTD., TWO PRUDENTIAL PLAZA, SUITE 4900, 180 NORTH STETSON AVENUE, CHICAGO, IL, 60601-6731, US
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 1333
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are pteridine derivatives of formula (I): (I), wherein, for example, R.sub.1 and R.sub.2 are hydrogen, C.sub.1-C.sub.6 alkyl, carboxyl, formyl, C.sub.1-C.sub.6 hydroxyalkyl, C.sub.1-C.sub.6 carboxyalkyl, C.sub.1-C.sub.6 formyl alkyl, C.sub.1-C.sub.6 alkoxy, acyloxy, acyloxyalkyl wherein the alkyl is C.sub.1-C.sub.6, halogen, or hydroxy, or a group of formula II: (II); and R.sub.3 is (a) phenyl or (b) a cyclic group having at least one 5 or 6-membered heterocyclic ring, optionally with a carbocyclic or heterocyclic ring fused thereto, wherein each heterocyclic ring has at least one hetero atom chosen from O, N, or S; or (c) a phenyl group or a cyclic group, the cyclic group optionally with a carbocyclic or heterocyclic ring fused thereto, which is substituted with 1 to 5 substituents. Disclosed also are pharmaceutical compositions, a method of enhancing the chemotherapeutic effectiveness of cancer treatment agents, a method of deactivating the O.sup.6-**alkylguanine**-DNA **alkyltransferase** enzyme, and a method of inhibiting the reaction of O.sup.6-**alkylguanine** -DNA **alkyltransferase** enzyme with an alkylated DNA. ##STR1##

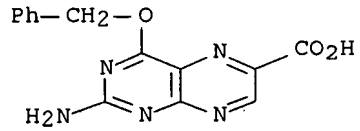
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **737817-20-8P**, 2-Amino-4-(benzyloxy)-6-hydroxymethylpteridine
737817-22-0P
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-alkylguanine-DNA alkyltransferase)
RN 737817-20-8 USPATFULL
CN 6-Pteridinemethanol, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)



RN 737817-22-0 USPATFULL
CN 6-Pteridinecarboxaldehyde, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

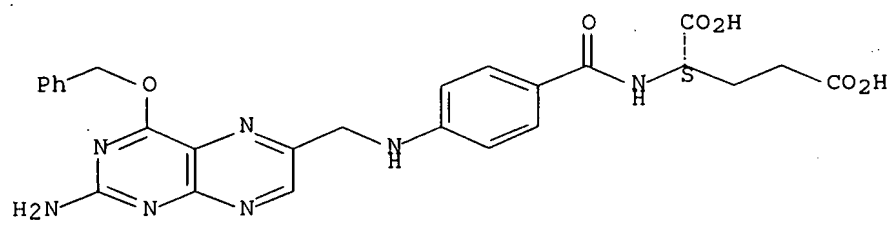


IT **737817-21-9P 737817-23-1P**, O4-Benzylfolic acid
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-alkylguanine-DNA alkyltransferase)
RN 737817-21-9 USPATFULL
CN 6-Pteridinecarboxylic acid, 2-amino-4-(phenylmethoxy)- (CA INDEX NAME)

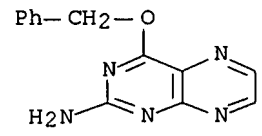


RN 737817-23-1 USPATFULL
CN L-Glutamic acid, N-[4-[[[2-amino-4-(phenylmethoxy)-6-pteridinyl]methyl]amino]benzoyl]- (CA INDEX NAME)

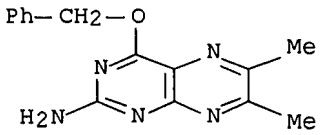
Absolute stereochemistry.



IT **13005-91-9 101092-03-9**, 2-Amino-4-(benzyloxy)-6,7-dimethylpteridine
(preparation of 2-amino-O4-substituted pteridines for therapeutic use as inhibitors of O6-alkylguanine-DNA alkyltransferase)
RN 13005-91-9 USPATFULL
CN 2-Pteridinamine, 4-(phenylmethoxy)- (CA INDEX NAME)



RN 101092-03-9 USPATFULL
CN 2-Pteridinamine, 6,7-dimethyl-4-(phenylmethoxy)- (9CI) (CA INDEX NAME)



L18 ANSWER 7 OF 8 USPATFULL on STN

ACCESSION NUMBER:	2000:98409 USPATFULL Full-text
TITLE:	Pyrimidine derivatives and guanine derivatives, and their use in treating tumor cells
INVENTOR(S):	McMurry, Thomas Brian Hamilton, Dublin 2, Ireland McElhinney, Robert Stanley, Dublin 2, Ireland McCormick, Joan Elizabeth, Dublin 2, Ireland Donnelly, Dorothy Josephine, Dublin 2, Ireland Murray, Paul, Dublin 2, Ireland Carola, Christophe, Dublin 2, Ireland Elder, Rhoderick Hugh, Manchester, United Kingdom Kelly, Jane, Manchester, United Kingdom Margison, Geoffrey Paul, Manchester, United Kingdom Watson, Amanda Jean, Manchester, United Kingdom Rafferty, Joseph Anthony, Manchester, United Kingdom Willington, Mark Andrew, Manchester, United Kingdom Middleton, Mark Ross, Manchester, United Kingdom
PATENT ASSIGNEE(S):	Cancer Research Campaign Technology Limited, London, United Kingdom (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6096724		20000801	<--
APPLICATION INFO.:	US 1998-88740		19980602 (9)	

RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1995-568576, filed on 7 Dec 1995 And a continuation-in-part of Ser. No. US 1995-572966, filed on 15 Dec 1995, now patented, Pat. No. US 5929046 And a continuation-in-part of Ser. No. WO 1996-IE84, filed on 9 Dec 1996
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Wilson, James O.
LEGAL REPRESENTATIVE:	Smith, Gambrell & Russell, LLP
NUMBER OF CLAIMS:	34
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	35 Drawing Figure(s); 35 Drawing Page(s)
LINE COUNT:	2902

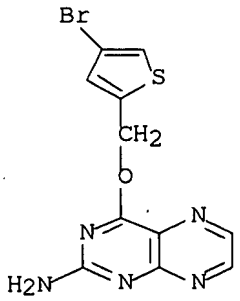
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides certain 6-hetarylalkyloxy pyrimidine derivatives of formula II ##STR1## wherein R is (i) a cyclic group having at least one 5- or 6-membered heterocyclic ring, optionally with a carbocyclic or heterocyclic ring fused thereto, the or each heterocyclic ring having at least one hetero atom chosen from O, N, or S, or a substituted derivative thereof; or (ii) phenyl or a substituted derivative thereof,

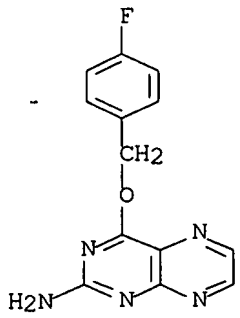
R.sup.2 is selected from H, C.sub.1 -C.sub.5 alkyl, halogen or NH.sub.2,

R.sup.4 and R.sup.5 which are the same or different are selected from H, NH.sub.2 or NO.sub.n where n=1 or 2, or R.sup.4 and R.sup.5 together with the pyrimidine ring form a 5- or 6-membered ring structure containing one or more heterocyclic atoms, and pharmaceutically acceptable salts thereof, exhibit the ability to deplete O.sup.6 - **alkylguanine**-DNA **alkyltransferase** (ATase) activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **192441-15-9P 192441-17-1P 286941-18-2P**
(preparation of pyrimidine derivs. and guanine analogs for treating tumor cells and as inhibitors of DNA alkyltransferase)
RN 192441-15-9 USPATFULL
CN 2-Pteridinamine, 4-[(4-bromo-2-thienyl)methoxy]- (9CI) (CA INDEX NAME)



RN 192441-17-1 USPATFULL
CN 2-Pteridinamine, 4-[(4-fluorophenyl)methoxy]- (9CI) (CA INDEX NAME)



RN 286941-18-2 USPATFULL
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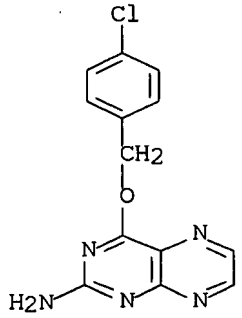


L18 ANSWER 8 OF 8 USPATFULL on STN
ACCESSION NUMBER: 1999:85397 USPATFULL Full-text
TITLE: Pyrimidine and purine derivatives and their use in treating tumour cells
INVENTOR(S): McMurry, Thomas Brian Hamilton, Killiney, Ireland
McElhinney, Robert Stanley, Delgany, Ireland
Donnelly, Dorothy Josephine, Dublin, Ireland
Murray, Paul, Nurney, Ireland
Carola, Christophe, St. Leu-la-Foret, France
Elder, Rhoderick Hugh, Cheshire, United Kingdom
Kelly, Jane, Manchester, United Kingdom
Margison, Geoffrey Paul, Poynton, United Kingdom
Rafferty, Joseph Anthony, Stockport, United Kingdom
Watson, Amanda Jean, Cheshire, United Kingdom
Willington, Mark Andrew, Cheshire, United Kingdom
PATENT ASSIGNEE(S): Cancer Research Campaign Technology Limited, London, United Kingdom (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5929046		19990727	<--
APPLICATION INFO.:	US 1995-572966		19951215 (8)	

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-568576, filed on 7 Dec 1995 which is a continuation-in-part of Ser. No. WO 1994-IE31, filed on 8 Jun 1994
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kight, John
ASSISTANT EXAMINER: Crane, L. Eric
LEGAL REPRESENTATIVE: Beveridge, DeGrandi, Weilacher & Young, LLP
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1,14,18,19
LINE COUNT: 1359
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

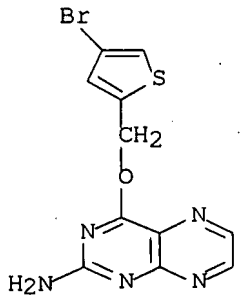
AB The present invention provides certain 6-hetarylalkyloxy pyrimidine derivatives of formula II ##STR1## wherein R is (i) a cyclic group having at least one 5- or 6-membered heterocyclic ring, optionally with a carbocyclic or heterocyclic ring fused thereto, the or each heterocyclic ring having at least one hetero atom chosen from O, N, or S, or a substituted derivative thereof; or (ii) phenyl or a substituted derivative thereof,

R.sup.2 is selected from H, C.sub.1 -C.sub.5 alkyl, halogen or NH.sub.2,

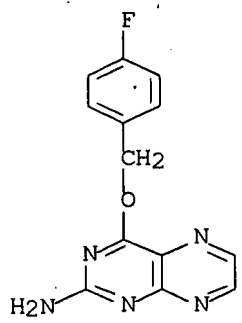
R.sup.4 and R.sup.5 which are the same or different are selected from

H, NH.sub.2 or NO.sub.n where n=1 or 2, or R.sup.4 and R.sup.5 together with the pyrimidine ring form a 5-or 6-membered ring structure containing one or more heterocyclic atoms, and pharmaceutically acceptable salts thereof, exhibit the ability to deplete O.sup.6 - **alkylguanine**-DNA **alkyltransferase** (ATase) activity.

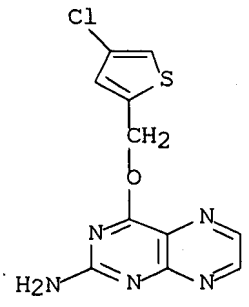
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **192441-15-9P 192441-17-1P 192441-43-3P**
(preparation of 6-heteroarylalkoxypyrimidines and -purines having O6-alkylguanine-DNA alkyltransferase depleting activity)
RN 192441-15-9 USPATFULL
CN 2-Pteridinamine, 4-[(4-bromo-2-thienyl)methoxy]- (9CI) (CA INDEX NAME)



RN 192441-17-1 USPATFULL
CN 2-Pteridinamine, 4-[(4-fluorophenyl)methoxy]- (9CI) (CA INDEX NAME)



RN 192441-43-3 USPATFULL
CN 2-Pteridinamine, 4-[(4-chloro-2-thienyl)methoxy]- (9CI) (CA INDEX NAME)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SEARCH HISTORY

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(FILE 'HOME' ENTERED AT 17:26:37 ON 09 OCT 2007)

FILE 'HCAPLUS' ENTERED AT 17:28:50 ON 09 OCT 2007
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L1 106 SEA ABB=ON ("MOSCHEL ROBERT C"/AU OR "MOSCHEL ROBERT CARL"/AU)
E NELSON MICHAEL E/AU
L2 21 SEA ABB=ON ("NELSON MICHAEL E"/AU OR "NELSON MICHAEL EARL"/AU OR "NELSON MICHAEL ERIC"/AU)
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L3 491 SEA ABB=ON ("PEGG ANTHONY A"/AU OR "PEGG ANTHONY E"/AU OR "PEGG ANTHONY E E"/AU OR "PEGG ANTONY E"/AU)
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L5 3 SEA ABB=ON L1 AND L2 AND L3 AND L4
SELECT RN L5 1-3

FILE 'REGISTRY' ENTERED AT 17:30:02 ON 09 OCT 2007
L6 13 SEA ABB=ON (101092-03-9/BI OR 13005-91-9/BI OR 19916-72-4/BI OR 26776-70-5/BI OR 4271-30-1/BI OR 737817-20-8/BI OR 737817-21-9/BI OR 737817-22-0/BI OR 737817-23-1/BI OR 77271-19-3/BI OR 107-22-2/BI OR 19916-73-5/BI OR 431-03-8/BI)

FILE 'HCAPLUS' ENTERED AT 17:30:08 ON 09 OCT 2007
L7 2 SEA ABB=ON L5 AND L6

FILE 'REGISTRY' ENTERED AT 17:30:42 ON 09 OCT 2007
L8 STR
L9 1 SEA SSS SAM L8
L10 30 SEA SSS FUL L8

FILE 'HCAPLUS' ENTERED AT 17:32:41 ON 09 OCT 2007
L11 49 SEA ABB=ON L10
L12 41 SEA ABB=ON L11 AND (PRD<20060829 OR PD<20060829)
L13 5 SEA ABB=ON L12 AND ?ALKYLTRANSFERASE?

FILE 'USPATFULL' ENTERED AT 17:34:21 ON 09 OCT 2007
L14 3 SEA ABB=ON L12 AND ?ALKYLTRANSFERASE?

FILE 'HCAPLUS, USPATFULL' ENTERED AT 17:34:33 ON 09 OCT 2007
L15 6 DUP REMOV L13 L14 (2 DUPLICATES REMOVED)

FILE 'HCAPLUS, USPATFULL' ENTERED AT 17:34:45 ON 09 OCT 2007
L16 8 SEA ABB=ON L12 AND ?ALKYLGUANINE?
L17 8 SEA ABB=ON L13 OR L16
L18 8 SEA ABB=ON L15 OR L17
SAV L12 JAI566L12/A **(**Results saved, should you want to see Additional citations.)**

FILE HOME

FILE HCAPLUS

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FILE COVERS 1907 - 9 Oct 2007 VOL 147 ISS 16
FILE LAST UPDATED: 8 Oct 2007 (20071008/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 8 OCT 2007 HIGHEST RN 949630-10-8
DICTIONARY FILE UPDATES: 8 OCT 2007 HIGHEST RN 949630-10-8

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 9 Oct 2007 (20071009/PD)
FILE LAST UPDATED: 9 Oct 2007 (20071009/ED)
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HIGHEST APPLICATION PUBLICATION NUMBER: US2007234457
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